

CLAIMS

1. A method for any Access Network (xAN) to provide an interface between a Mobile Node (MN) and a Local Service Function (LSF), comprising the following steps performed by  
5 the xAN:

a) receiving a message from the MN to initiate an OSI Layer 2 session with an access network;

b) terminating the L2 session between the MN and the access network;

10 c) sending notification of OSI Layer 2 termination to the Mobile Node;

d) receiving an xAN resource management request from the LSF;

e) managing xAN resources as requested by the LSF; and

15 f) notifying the LSF that all resource management is complete.

2. The method of Claim 1, wherein the step of terminating further comprises terminating the L2 protocol and permitting the MN to initiate L3 IPM messaging with the  
20 LSF components.

3. The method of Claim 1, wherein the step of sending notification further comprises providing the MN with at least the SMM IP address and SMM NAI to access the LSF so that the MN may communicate directly with the LSF.

4. The method of Claim 1, wherein the step of managing xAN resources further comprises:

- a) mapping L2 and L3 addresses;
- b) allocating computing resources for buffering data packets destined for the MN;
- c) forwarding the data packets to a second LSF when the MN moves from a first LSF to the second LSF;
- d) detecting L2 movement of the MN from the first LSF to the second LSF;
- e) translating L2 movement of the MN from the first LSF to the second LSF into L3; and
- f) re-claiming the computing and routing resources when not used by the MN.

5. A method for providing IP-connectivity between a Mobile Node (MN) and a Local Service Function (LSF), comprising the following steps performed by the LSF:

- a) receiving a first message from the MN to initiate an IPM session with the LSF;
- b) establishing an IPM OSI Layer 3 (L3) session with the MN;
- c) sending an IPM first message to a Network Service Function (NSF) to initiate an IPM OSI L3 session between the MN and the LSF;
- d) receiving from the NSF one or more IPM messages that are destined for the MN;
- e) generate resource management request to the xAN;

f) receive notification from the xAN that resource management is complete; and

g) sending said one or more IPM messages generated by NSF to the MN.